International Conference on Astrophysics and Particle Physics

December 08-10, 2016 Dallas, Texas, USA

Sommerfeld enhancement of dark matter annihilation in galaxies and galaxy clusters

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In this presentation, I will discuss the possible consequences of the Sommerfeld enhancement of dark matter annihilation in galaxies. I will show that the Sommerfeld enhancement of the dark matter annihilation cross section via invisible sterile neutrino channel can give a sufficiently large annihilation rate to solve the core-cusp problem in astrophysics. We will also discuss if there is any possible signal of the Sommerfeld enhancement of dark matter annihilation based on the recent FermiLAT data.

Biography

Man Ho Chan has completed his PhD from the Chinese University of Hong Kong. Currently, he is an Assistant Professor at the Hong Kong Institute of Education, China. He has published more than 30 papers in reputed journals. His major research area is Dark Matter Astrophysics.

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